



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.

WASHINGTON, D.C. 20460

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DATA MATRIX

Date: Sept. 18, 2019	EPA Reg No./ File Symbol: 91813-8	Page 1 of 31
Applicant's/Registrant's Name and Address: UPL Delaware, Inc. 630 Freedom Business Center King of Prussia, PA 19406	Product: UPL Metalaxyl Technical	
Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
PRODUCT SPECIFIC					
830.1550	Product identity and composition	49754001	UPL Delaware, Inc.	OWN	
830.1600	Description of Materials Used to Produce the Product	49754001	UPL Delaware, Inc.	OWN	
830.1620	Description of the Production Process	49754001	UPL Delaware, Inc.	OWN	
830.1650	Description of the Formulation Process				Not applicable for technical
830.1670	Discussion of Formation of Impurities	49754001	UPL Delaware, Inc.	OWN	
830.1700	Preliminary Analysis	49754002	UPL Delaware, Inc.	OWN	
830.1750	Certified Limits	49754001	UPL Delaware, Inc.	OWN	
830.1800	Enforcement Analytical Method	49754003	UPL Delaware, Inc.	OWN	
830.6302	Color	49754004	UPL Delaware, Inc.	OWN	
830.6303	Physical State	49754004	UPL Delaware, Inc.	OWN	
830.6304	Odor	49754004	UPL Delaware, Inc.	OWN	
830.6313	Stability to Normal and Elevated Temperatures, Metals and Metal Ions	49754005	UPL Delaware, Inc.	OWN	
830.6314	Oxidation/Reduction: Chemical Incompatibility	49754013	UPL Delaware, Inc.	OWN	Waiver: does not contain oxidizing or reducing agents.
830.6315	Flammability	49754013	UPL Delaware, Inc.	OWN	Waiver. Solid material and not flammable.
830.6316	Explosibility	49754013	UPL Delaware, Inc.	OWN	Waiver. Does not contain explosive materials.
830.6317	Storage Stability	49754006	UPL Delaware, Inc.	OWN	
830.6319	Miscibility				Not applicable for TGAI

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6320	Corrosion Characteristics	49754006	UPL Delaware, Inc.	OWN	
830.6321	Dielectric Breakdown Voltage				Not applicable for TGAI
830.7000	pH	49754007	UPL Delaware, Inc.	OWN	
830.7050	UV/Visible Absorption	48794211	Albaugh, LLC	PAY	
830.7100	Viscosity				Not applicable to solids
830.7200	Melting Point/Melting Range	49754008	UPL Delaware, Inc.	OWN	
830.7220	Boiling Point/Boiling Range				Not applicable to solids
830.7300	Density/Relative Density/Bulk Density	49754020	UPL Delaware, Inc.	OWN	
830.7370	Dissociation Constants in Water	49754009	UPL Delaware, Inc.	OWN	
830.7520	Particle size, fiber length, and diameter distribution	49754013	UPL Delaware, Inc.	OWN	Waiver. TGAI is not a fibrous material or water-insoluble
830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method	49754010	UPL Delaware, Inc.	OWN	
830.7560	Partition Coefficient (n-octanol/water), Generator Method				See 830.7550
830.7570	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography				See 830.7550
830.7840	Water Solubility: Column Elution Method, Shake Flask Method	49754013 49754011	UPL Delaware, Inc. UPL Delaware, Inc.	PL OWN	
830.7860	Water Solubility: Generator Column Method				See 830.7840
830.7950	Vapor Pressure	49754012	UPL Delaware, Inc.	OWN	
870.1100	Acute oral toxicity – rat	49754014	UPL Delaware, Inc.	OWN	

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.1200	Acute dermal toxicity – rat	49754015	UPL Delaware, Inc.	OWN	
870.1300	Acute inhalation toxicity – rat	49754016	UPL Delaware, Inc.	OWN	
870.2400	Eye irritation	49754017	UPL Delaware, Inc.	OWN	
870.2500	Skin irritation	49754018	UPL Delaware, Inc.	OWN	
870.2600	Skin sensitization	49754019	UPL Delaware, Inc.	OWN	
GENERIC DATA					
850.2100	Acute Avian Oral Toxicity	00077334 49311101	Metalaxyl Task Force	OLD PER	See endnote ¹
850.2200	Acute Avian Dietary Toxicity	00077335 00063988 00063989		OLD OLD OLD	See endnote ²
850.2400	Wild Mammal Toxicity				Not required ³
850.2300	Avian Reproductive Toxicity	43624602 43624603 44110001 44755001 44761701 49115801 49115901	Metalaxyl Task Force Metalaxyl Task Force	OLD OLD OLD OLD OLD PER PER	See endnote ⁴
850.2500	Simulated or Actual Field Testing				Not required ⁵

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
850.1075	Freshwater Fish Toxicity	00072396 00100446 00071303 00071302 00100447 00071301 49024001 49024002 49024006 49024011	Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force	OLD OLD OLD OLD OLD OLD PER PER PER PER	See endnote ⁶
850.1010	Freshwater Invertebrate Toxicity	00071304 00071305 00100448 49024004	Metalaxyl Task Force	OLD OLD OLD PER	See endnote ⁷
850.1025, 850.1035, 850.1045, 850.1055, 850.1075	Acute Toxicity Estuarine and Marine Organisms	41288101 41288103 41288104 42337501 42378101 49024003 49024010 49024011 49145101	Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force	OLD OLD OLD OLD OLD PER PER PER PER	See endnote ⁸
850.1300	Aquatic Invertebrate Life Cycle (Freshwater)	00071307		OLD	See endnote ⁹
850.1350	Aquatic Invertebrate Life Cycle (Saltwater)	49116001	Metalaxyl Task Force	PER	See endnote ¹⁰

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
850.1400	Fish Early Life Stage (Freshwater)	00071308 49024006	Metalaxyl Task Force	OLD PER	See endnote ¹¹
850.1400	Fish Early Life Stage (Saltwater)	49116001	Metalaxyl Task Force	PER	See endnote ¹²
850.1500	Life Cycle Fish				Not required ¹³
850.1710, 850.1730, 850.1850	Aquatic Organisms Bioavailability, Biomagnification, Toxicity	00100468 00100470		OLD OLD	See endnote ¹⁴
850.1950	Simulated or Actual Field Testing for Aquatic Organisms				Not required ¹⁵
850.1735	Whole Sediment: Acute Freshwater Invertebrates				Not required ¹⁶
850.1740	Whole Sediment: Acute Marine Invertebrates				Not required ¹⁷
850.3020	Honey Bee Acute Contact Toxicity	40276701		OLD	See endnote ¹⁸
850.3030	Honeybee Toxicity of Residues on Foliage				Not required ¹⁹
850.3040	Field Testing for Pollinators				Not required ²⁰
870.6100	Delayed Neurotoxicity (Acute) – Hen				Not required
870.6200	Acute Neurotoxicity – Rat	48865901	Syngenta Crop Protection, LLC	PAY	See endnote ²¹
870.3050	28-Day Oral Toxicity in Rodents	43800390 43800391		OLD OLD	
870.3100	90-Day Oral: Rodent	00084110 00148087 43823202 48104702	Metalaxyl Task Force	OLD OLD OLD PER	See endnote ²²

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.3150	90-Day Oral: Non-Rodent	00084111 00071598		OLD OLD	See endnote ²³
870.3200	21/28-Day Dermal Toxicity	00072394		OLD	See endnote ²⁴
870.3250	90-Day Dermal Toxicity				Not required
870.3465	90-Day Inhalation Toxicity	00109471 00032545		OLD OLD	See endnote ²⁵
870.6100	28-Day Delayed Neurotoxicity Hen				Not required
870.6200	90-Day Neurotoxicity	48865902	Syngenta Crop Protection, LLC	PAY	See endnote ²⁶
870.4100	Chronic Oral Rodent	00098481 00132009 00150185 00030295 00071598 00127878 00127880 00130950 00130951 00154325		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ²⁷

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.4200	Carcinogenicity	00098481 00132009 00150185 00103354 00150094 00071565 00080302 00137469 00137471 00137472 00138117 00141058 00142183 00144310		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ²⁸
870.4300	Combined Chronic / Carcinogenicity	00098481 00132009 00150185		OLD OLD OLD	

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.3700	Reproduction/Developmental Toxicity Screening Test	00161405 00144423 00148867 00144371 00144372 00148866 00154938 00161404 00071564 00144422 43800393 44208401		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ²⁹
870.3800	2-Generation Reproduction: Rat	00071600 00130952 00141089 00144372 00144421 00144423 00161404 00161405		OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ³⁰
870.6300	Developmental Neurotoxicity Study				Not required
870.SUPP	Reproduction and Fertility Effects	00084112		OLD	

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.5100	Bacterial Reverse Mutation Test	00084113 00154301 00154302 00103359 00103362 00154309 00154300 00154303 00154304 00154305 00160039 43800394 43800401		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ³¹

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.5300, 870.5375	<i>In vitro</i> Mammalian Cell Assay	00084114 00103361 00154307 00154310 00103359 00103362 00103363 00154306 00154309 00160037 00154663 00103362 00154309 43800401 43800402 43800403 43800404 43800394 43800395		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ³²

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.5385, 870.5395, 870.5450; 870.5550	<i>In vivo</i> Cytogenetics and Other Effects	00084114 00103360 00103361 00154307 00154310 00154306 00154663 00103363 00160037		OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ³³
870.SUPP	Non-guideline reverse mutation test in yeast cells	00103359		OLD	
870.7485	Metabolism and Pharmacokinetics	00071613 00071614 00099084 41664501 00161402 43317301		OLD OLD OLD OLD OLD OLD	See endnote ³⁴
870.7200	Companion Animal Safety				Not required
870.7600	Dermal Penetration	00161402 45085901 45085902		OLD OLD OLD	See endnote ³⁵
870.7800	Immunotoxicity	48865903	Syngenta Crop Protection, LLC	PAY	See endnote ³⁶
875.1100	Dermal Exposure – Outdoor		Agricultural Handler Exposure Task Force	OWN	See endnote ³⁷

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875.1200	Dermal Exposure - Indoor				Not required
875.1300	Inhalation Exposure – Outdoor		Agricultural Handler Exposure Task Force	OWN	See endnote ³⁷
875.1400	Inhalation Exposure - Indoor				Not required
875.1500	Biological Monitoring				Not required
875.1600	Data Reporting and Calculations				Not required
875.1700	Product Use Information				Not required
875.2100	Dislodgeable Foliar Residue and Turf Transferable Residues				Not required ³⁸
875.2200	Soil Residue Dissipation		Outdoor Residential Exposure Task Force	OWN	See endnote ³⁹
			Agricultural Re-Entry Task Force	OWN	
875.2400	Dermal Exposure		Outdoor Residential Exposure Task Force	OWN	See endnote ³⁹
			Agricultural Re-Entry Task Force	OWN	
875.2500	Inhalation Exposure		Outdoor Residential Exposure Task Force	OWN	See endnote ³⁹
			Agricultural Re-Entry Task Force	OWN	
875.2600	Biological Monitoring				Not required
875.2700	Product Use Information				Not required
875.2800	Descriptions of Human Activity				Not required
875.2900	Data Reporting and Calculations				Not required
875.3000	Nondietary Ingestion Exposure				Not required

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201-1	Droplet Size Spectrum		Spray Drift Task Force	OWN	See endnote ⁴⁰
202-1	Droplet Size Spectrum		Spray Drift Task Force	OWN	See endnote ⁴⁰
850.4100	Tier 1: Seedling Emergence	49024016	Metalaxyl Task Force	PER	See endnote ⁴¹
850.4150	Tier 1: Vegetative Vigor	49024015	Metalaxyl Task Force	PER	See endnote ⁴²
850.4400, 850.5400	Tier 1: Aquatic Plant Growth	00148448 49024005 49024007 49024008 49024009 49024012	Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force	OLD PER PER PER PER PER	See endnote ⁴³
850.4100	Tier 2: Seedling Emergence	49024016	Metalaxyl Task Force	PER	See endnote ⁴¹
850.4150	Tier 2: Vegetative Vigor	49024015	Metalaxyl Task Force	PER	See endnote ⁴²
850.4400, 850.5400	Tier 2: Aquatic Plant Growth	00148448 49024005 49024007 49024008 49024009 49024012	Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force Metalaxyl Task Force	OLD PER PER PER PER PER	See endnote ⁴³
850.4300	Terrestrial Field				Not required ⁴⁴
850.4450	Aquatic Field				Not required ⁴⁵
850.SUPP	Analytical Method Verification in Freshwater	49024013	Metalaxyl Task Force	PER	
850.SUPP	Analytical Method Verification in Avian Diet	49024014	Metalaxyl Task Force	PER	

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Applicant's/Registrant's Name and Address: UPL Delaware, Inc. 630 Freedom Business Center King of Prussia, PA 19406	Product: UPL Metalaxyl Technical	
Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.2120	Hydrolysis	00104493 42259803		OLD OLD	See endnote ⁴⁶
835.2240	Photodegradation in Water	41156001		OLD	See endnote ⁴⁷
835.2410	Photodegradation in Soil	00100456 43883402		OLD OLD	See endnote ⁴⁸
835.2370	Photodegradation in Air				Not required
835.4100	Aerobic Soil Metabolism	00104494 43935301		OLD OLD	See endnote ⁴⁹
835.4200	Anaerobic Soil Metabolism	00104494		OLD	See endnote ⁵⁰
835.4300	Aerobic Aquatic Metabolism	42259802 42259801		OLD OLD	See endnote ⁵¹
835.4400	Anaerobic Aquatic Metabolism	42259801		OLD	See endnote ⁵²
835.1230	Leaching/Adsorption/Desorption	00100464 00100465 00100466 00104493 00104495		OLD OLD OLD OLD OLD	See endnote ⁵³
835.1240	Soil Column Leaching	43875309 43935302 44703505 44703538		OLD OLD OLD OLD	
835.1410	Volatility – Laboratory	00100455		OLD	See endnote ⁵⁴
835.8100	Volatility – Field				Not required

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.6100	Soil Field Dissipation Study	40985402 40985403 40985405 41765001 41765002 41809301 44703505		OLD OLD OLD OLD OLD OLD OLD	See endnote ⁵⁵
835.6200	Aquatic Sediment Field Dissipation Study	42259803 42259804		OLD OLD	See endnote ⁵⁶
835.6300	Forest Field Dissipation Study				Not required
835.6400	Combination and Tank Mixes				Not required
835.7100	Ground Water Monitoring				Reserved ⁵⁷
890.1100	Amphibian Metamorphosis	48685801	Metalaxyl EDSP Consortium	PAY	See endnote ⁵⁸
890.1150	Androgen Receptor Binding (Rat Prostate)	48617601	Metalaxyl EDSP Consortium	PAY	See endnote ⁵⁹
890.1200	Aromatase (Human Recombinant)	48617602	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁰
890.1250	Estrogen Receptor Binding	48617607	Metalaxyl EDSP Consortium	PAY	See endnote ⁶¹
890.1300	Estrogen Receptor Transcriptional Activation Assay	48617603	Metalaxyl EDSP Consortium	PAY	See endnote ⁶²
890.1350	Fish Short-Term Reproduction	48685802	Metalaxyl EDSP Consortium	PAY	See endnote ⁶³
890.1400	Hershberger (Rat)	48617604	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁴
890.1450	Female Pubertal (Rat)	48701301	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁵
890.1500	Male Pubertal (Rat)	48701301	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁶
890.1550	Steroidogenesis	48617605	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁷

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Applicant's/Registrant's Name and Address: UPL Delaware, Inc. 630 Freedom Business Center King of Prussia, PA 19406	Product: UPL Metalaxyl Technical	
Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
890.1600	Uterotrophic (Rat)	48617606	Metalaxyl EDSP Consortium	PAY	See endnote ⁶⁸
860.1300	Nature of the Residue: Plants	00071601 00071602 00071603 00071604 00071605 00071606 00071607 00071608 00071609 00071610 00114379 00128102		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁶⁹

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1300	Nature of the Residue: Livestock	00071611 00071612 41664503 41664504 41664505 41664506 42115801 42115802 42115803 42115804 42115805 42115806 44208101		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁷⁰
860.1850	Confined Rotational Crops	41870308 42196501 42196502 42196503 43317302		OLD OLD OLD OLD OLD	See endnote ⁷¹

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Applicant's/Registrant's Name and Address: UPL Delaware, Inc. 630 Freedom Business Center King of Prussia, PA 19406	Product: UPL Metalaxyl Technical	
Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1500	Magnitude of the Residue in Plants: Berries (blueberries, cranberries, grapes, raspberries, strawberries)	00164649 00164651 41996401 00138818 00155845 41150101 00127769 00155237 40880401 44208102		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁷⁹
860.1500	Magnitude of the Residue in Plants: Clover	40832901 42226801		OLD OLD	
860.1500	Magnitude of the Residue in Plants: Cucurbit Vegetables	00071615 00098428 00130693 00148103		OLD OLD OLD OLD	See endnote ⁸⁰
860.1500	Magnitude of the Residue in Plants: Grasses, forage and hay	42134501		OLD	
860.1500	Magnitude of the Residue in Plants: Citrus Fruits	00117969 00133020 00148440		OLD OLD OLD	See endnote ⁸¹
860.1500	Magnitude of the Residue in Plants: Brassica Vegetables	00071615 00130773 42159801 43218501		OLD OLD OLD OLD	See endnote ⁸²

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1500	Magnitude of the Residue in Plants: Cotton	00109402 41870305 44208103		OLD OLD OLD	See endnote ⁸³
860.1500	Magnitude of the Residue in Plants: Root and Tuber Vegetables	40838301 40838302 00128102 41688900 41688901 00104654 00071616 00098428 40569301 41870307 43620101		OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁸⁴
860.1500	Magnitude of the Residue in Plants: Hops	00079433 40071502 40411002 40746901 40909401 40827401		OLD OLD OLD OLD OLD OLD	See endnote ⁸⁵

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1500	Magnitude of the Residue in Plants: Leafy Vegetables	00071615 00097511 00114377 40775801 00071672 00114378 40790201 41636201 41587801 48137901	Syngenta Crop Protection, LLC	OLD OLD OLD OLD OLD OLD OLD OLD OLD PAY	See endnote ⁸⁶
860.1500	Magnitude of the Residue in Plants: Legume Vegetables	00129003 40569303 00071672 00104390 00148440		OLD OLD OLD OLD OLD	See endnote ⁸⁷
860.1500	Magnitude of the Residue in Plants: Onions (dry bulb, green onions, spring onions, scallions, Japanese bunching onions, green shallots, leeks)	00071615 00098428 00130694 00148103 42991601		OLD OLD OLD OLD OLD	See endnote ⁸⁸
860.1500	Magnitude of the Residue in Plants: Nut trees (almond and walnut)	00164651		OLD	See endnote ⁸⁹
860.1500	Magnitude of the Residue in Plants: Papaya	40490501 44914204 44941601		OLD OLD OLD	See endnote ⁹⁰

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1500	Magnitude of the Residue in Plants: Peanuts	00128738 41870306 42498701 41870306		OLD OLD OLD OLD	See endnote ⁹¹
860.1500	Magnitude of the Residue in Plants: Fruiting Vegetables	00148103 00148440 00157480 40066101 40066102 40569601 42984001 44208104 44208105		OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁹²
860.1500	Magnitude of the Residue in Plants: Pineapple	00109472		OLD	See endnote ⁹³
860.1500	Magnitude of the Residue in Plants: Stone Fruits	00164650		OLD	See endnote ⁹⁴
860.1500	Magnitude of the Residue in Plants: Tobacco	00100476 00100477 00100478 00104485 00140371 00148440 42196503		OLD OLD OLD OLD OLD OLD OLD	See endnote ⁹⁵

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1500	Magnitude of the Residue in Plants: Cereal Grains, except barley, oat and wheat	00071672 00104387 00128102 41689701 41689702 41870301 41870305 41912903 43775401		OLD OLD OLD OLD OLD OLD OLD OLD OLD	See endnote ⁹⁶
860.1500	Magnitude of the Residue in Plants: Grasses	42134501 43271001		OLD OLD	
860.1500	Magnitude of the Residue in Plants: Sunflowers	00128102 41912902		OLD OLD	See endnote ⁹⁷
860.1500	Magnitude of the Residue in Plants: Canola	43602401		OLD	
860.1520	Magnitude of the Residue in Processed Food or Feed: Apples	00126315		OLD	See endnote ⁹⁸
860.1520	Magnitude of the Residue in Processed Food or Feed: Citrus	00117969		OLD	See endnote ⁹⁹
860.1520	Magnitude of the Residue in Processed Food or Feed: Cotton	00109402 41870305 44208103		OLD OLD OLD	
860.1520	Magnitude of the Residue in Processed Food or Feed: Root and Tuber Vegetables	41870307 40106601 40569301		OLD OLD OLD	See endnote ¹⁰⁰

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1520	Magnitude of the Residue in Processed Food or Feed: Legume Vegetables	00071672		OLD	See endnote ¹⁰¹
860.1520	Magnitude of the Residue in Processed Food or Feed: Peanuts	00128738		OLD	See endnote ¹⁰²
860.1520	Magnitude of the Residue in Processed Food or Feed: Fruiting Vegetables	00148440 00157480 44208104		OLD OLD OLD	See endnote ¹⁰³
860.1520	Magnitude of the Residue in Processed Food or Feed: Stone Fruits	00164650		OLD	See endnote ¹⁰⁴
860.1520	Magnitude of the Residue in Processed Food or Feed: Cereal Grains except barley, oat, and wheat	41870301 41870302 41870303 42498701 42259805		OLD OLD OLD OLD OLD	See endnote ¹⁰⁵
860.1520	Magnitude of the Residue in Processed Food or Feed: Sunflower	41870304 42498701		OLD OLD	See endnote ¹⁰⁶
860.1520	Magnitude of the Residue in Processed Food or Feed: Canola	43602401		OLD	
860.1480	Magnitude of the Residue in Meat, Milk, Poultry, and Eggs	00100753 42115809 00071673 00071674 41664503 41664504		OLD OLD OLD OLD OLD OLD	See endnote ¹⁰⁷

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Ingredient: Metalaxyl (CAS No. 57837-19-1)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1400	Nature and Magnitude of the Residue in Potable Water				Not required
860.1400	Magnitude of the Residue in Fish				Not required
860.1400	Magnitude of the Residue in Plants Resulting from the Use of Irrigation Water				Not required
860.1460	Magnitude of the Residue in Food Handling Establishments				Not required
860.1560	Reasonable Grounds in Support of Petition	42041101		OLD	
860.1900	Field Rotational Crops	00114376 00071672 00104387 41870308		OLD OLD OLD OLD	See endnote ¹⁰⁸

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Endnotes for Data Matrix for UPL Metalaxyl Technical

¹ **850.2100** – MRID 00077334 was identified as acceptable and satisfies the data requirement as per the April 28, 2010 Problem Formulation for the Environmental Fate and Ecological Risk, and Endangered Species Assessments in Support of the Registration Review of Metalaxyl and Mefenoxam (Metalaxyl-M) (Problem Formulation). The Problem Formulation also identified passerine species as a data gap and it appears that MRID 49311101 was submitted in response to that data gap.

² **850.2200** – The studies cited were identified as acceptable and satisfy the data requirement as per the Problem Formulation.

³ **850.2400** – These data were not required as per the Problem Formulation.

⁴ **850.2300** – MRID numbers 44755001 and 44761701 were identified in the Problem Formulation as partially satisfying the data requirement, but that new data were required at a higher dose. It appears that these data were submitted under 49115801 and 49115901.

⁵ **850.2500** – These data were not required as per the Problem Formulation.

⁶ **850.1075** – MRID numbers 00100446, 00071302, 00100447, and 00071303 were identified in the Problem Formulation as satisfying the data requirement for technical products, but that new data were required for a typical end-use product. It appears that these data were submitted under 49024001 and 49024006.

⁷ **850.1010** – MRID numbers 00071305 and 00100447 were identified in the Problem Formulation as satisfying the data requirement for technical products, but that new data were required for a typical end-use product. It appears that these data were submitted under 49024004.

⁸ **850.1025, 850.1035, 850.1045, 850.1055, 850.1075** – MRID number 41288103 was identified in the Problem Formulation as satisfying the crustacean data requirement for technical products, but that new data were required for a typical end-use product as well as for technical and typical end-use products for bivalves and estuarine fish. It appears that these data were submitted under 49024003, 49024011, 49145101, and 49024010. The submission of TEP data for bivalves was waived.

⁹ **850.1300** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

¹⁰ **850.1350** – The study cited appears to have been submitted in response to data gaps identified in the Registration Review Process.

¹¹ **850.1400** – MRID 00071308 was identified as acceptable and satisfies the data requirement as per the Problem Formulation, but that an acute fathead minnow study was required. It appears that study was submitted under MRID 49024006.

¹² **850.1400** – The study cited appears to have been submitted in response to data gaps identified in the Registration Review Process.

¹³ **850.1500** – These data were not required as per the Problem Formulation.

¹⁴ **850.1710, 850.1730, 850.1850** – The studies cited were identified as acceptable and satisfy the data requirement as per the Problem Formulation.

¹⁵ **850.1950** – These data were not required as per the Problem Formulation.

¹⁶ **850.1735** – These data were not required as per the Problem Formulation.

¹⁷ **850.1740** – These data were not required as per the Problem Formulation.

¹⁸ **850.3020** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

¹⁹ **850.3030** – These data were not required as per the Problem Formulation.

²⁰ **850.3040** – These data were not required as per the Problem Formulation.

²¹ **870.6200** – The Dec. 7, 2009 Metalaxyl/Mefenoxam. Human Health Assessment Scoping Document in Support of Registration Review (DP Barcode 368462) (Scoping Document) identified this data requirement as a data gap for both metalaxyl and mefenoxam, preferably using mefenoxam. Although this data requirement was not listed on the DCI for metalaxyl, the submitted mefenoxam study is cited.

²² **870.3100** – The studies cited were listed in the September 1994 Reregistration Eligibility Decision document for Metalaxyl (RED) as being acceptable and satisfying the data requirement. Specific studies were not listed in the Scoping Document and no new data have been submitted since the RED.

²³ **870.3150** – The study cited were listed in the RED as being acceptable and satisfying the data requirement. The chronic feeding study is also cited.

²⁴ **870.3200** – The study cited were listed in the RED as being acceptable and satisfying the data requirement.

²⁵ **870.3465** – The study cited were listed in the RED as being acceptable and satisfying the data requirement.

²⁶ **870.6200** – The Scoping Document identified this data requirement as a data gap for both metalaxyl and mefenoxam, preferably using mefenoxam. Although this data requirement was not listed on the DCI for metalaxyl,

the submitted mefenoxam study is cited.

²⁷ **870.4100** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

²⁸ **870.4200** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

Note: MRID number 00132009 was incorrectly identified in the RED as MRID 00013209; the correct citation is listed.

²⁹ **870.3700** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

³⁰ **870.3800** – The study cited were listed in the RED as being acceptable and satisfying the data requirement.

³¹ **870.5100** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

³² **870.5300, 830.5375** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

³³ **870.5385, 870.5395, 870.5450, 870.5550** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

³⁴ **870.7485** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement.

Note: at the time of the RED, MRID 43117301, a submission to upgrade 41664501, was under review, but since no new data have been submitted, UPL Delaware, Inc. understand the study was classified as acceptable.

³⁵ **870.7600** – The study cited were listed in the RED as being acceptable and satisfying the data requirement.

Note: the MRID number was listed in Appendix B under 870.7485 (85-1), not 870.7600 (85-2).

³⁶ **870.7800** – The Scoping Document identified this data requirement as a data gap for both metalaxyl and mefenoxam, preferably using mefenoxam. Although this data requirement was not listed on the DCI for metalaxyl, the submitted mefenoxam study is cited.

³⁷ **875.1100, 875.1300** – UPL Delaware, Inc. is a licensee in good standing with the Agricultural Handler Exposure Task Force.

³⁸ **875.2100** – These data were not required as per the RED.

³⁹ **875.2200, 875.2400, 875.2500** – UPL Delaware, Inc. is a member in good standing with the Outdoor Residential Exposure Task Force and the Agricultural Re-Entry Task Force.

⁴⁰ **201-1, 202-1** – UPL Delaware, Inc. is a member in good standing with the Spray Drift Task Force.

⁴¹ **850.4100** – The study cited appears to have been submitted in response to data gaps identified in the Registration Review Process.

⁴² **850.4150** – The study cited appears to have been submitted in response to data gaps identified in the Registration Review Process.

⁴³ **850.4400, 850.5400** – MRID 00148448 partially satisfies the data requirement and additional data were required as per the Problem Formulation. It appears that the remaining data cited were submitted to satisfy those data gaps.

⁴⁴ **850.4300** – These data were not required as per the Problem Formulation.

⁴⁵ **850.4450** – These data were not required as per the Problem Formulation.

⁴⁶ **835.2120** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁴⁷ **835.2240** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁴⁸ **835.2410** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁴⁹ **835.4100** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁵⁰ **835.4200** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁵¹ **835.4300** – The study cited was identified as partially satisfying the data requirement and additional data were required as per the Problem Formulation. However, the metalaxyl DCI did not identify this guideline as a data requirement and UPL Delaware, Inc. believes that the study cited fully satisfies the data requirement.

⁵² **835.4400** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁵³ **835.1230** – The studies cited were identified as acceptable and satisfy the data requirement as per the Problem Formulation.

⁵⁴ **835.1410** – The study cited was identified as acceptable and satisfies the data requirement as per the Problem Formulation.

⁵⁵ **835.6100** – The Problem Formulation states that although the studies cited only partially fulfill the data requirement and are not fully acceptable, no additional data are required at this time.

⁵⁶ **835.6200** – The Problem Formulation states that although the studies cited only partially fulfill the data requirement and are not fully acceptable, no additional data are required at this time.

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- ⁵⁷ **835.7100** – This data requirement is reserved as per the Problem Formulation.
- ⁵⁸ **890.1100** – The study cited was identified as acceptable and satisfies the data requirement as per the June 29, 2015 Metalaxyl: Data Evaluation Records (DERs) for EDSP Tier 1 Assays (DP Barcodes D399227, D404681) (EDSP DERs).
- ⁵⁹ **890.1150** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁰ **890.1200** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶¹ **890.1250** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶² **890.1300** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶³ **890.1350** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁴ **890.1400** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁵ **890.1450** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁶ **890.1500** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁷ **890.1550** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁸ **890.1600** – The study cited was identified as acceptable and satisfies the data requirement as per the EDSP DERs.
- ⁶⁹ **860.1300** – The studies cited were listed in the RED as being acceptable and satisfying the data requirement. The Scoping Document confirmed there were no data gaps and no new data have been submitted since the RED.
- ⁷⁰ **860.1300** – The studies cited were listed in the RED as being acceptable, but that additional data were required related to the percent conversion from HMMA to DMA; these data appear to have been submitted under MRID 44208101. The Scoping Document confirmed there were no data gaps.
- ⁷¹ **860.1850** – The studies cited were listed in the RED as currently being in review. The Scoping Document confirmed there were no data gaps and no new data have been submitted since the RED. Therefore, UPL Delaware, Inc. understands these data satisfy the data requirement.
- ⁷² **860.1340** – The studies cited were listed in the RED as being acceptable, but that additional data were required. In a Sept. 13, 2001 EPA memorandum (D275477), additional information was requested for MRID 44208101; these data were submitted under 46714705, as well as 46714706. As such, it appears that the data cited satisfy those requirements as the Scoping Document confirmed there were no data gaps.
- ⁷³ **860.1380** – The studies cited were listed in the RED as being acceptable, but that additional data were required. It appears that the additional data cited satisfy those requirements as the Scoping Document confirmed there were no data gaps (also see June 11, 2001 EPA review (DP Barcode D248748) and March 13, 2001 EPA Review (DP Barcode D257302)).
- ⁷⁴ **860.1500** – The study cited was listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁷⁵ **860.1500** – The study cited was listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps. Note: accordingly to 40 CFR 180.1, alfalfa data can be used to support birdsfoot trefoil.
- ⁷⁶ **860.1500** – The studies cited were listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁷⁷ **860.1500** – MRID 00154446 was listed in the RED as being acceptable, but additional data were required. It appears that 44208106 was submitted to satisfy the data gap. The Scoping Document confirmed there were no data gaps.
- ⁷⁸ **860.1500** – The study cited was listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁷⁹ **860.1500** – The studies cited were listed in the RED as being acceptable, but additional data were required. It appears that 44208102 was submitted to satisfy the data gap. The Scoping Document confirmed there were no data gaps.
- ⁸⁰ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.

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- ⁸¹ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁸² **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps. MRID numbers 42159801 and 43218501 were also cited.
- ⁸³ **860.1500** – The studies cited were listed in the RED as being acceptable, but additional data were required. It appears that 44208103 was submitted to satisfy the data gap. The Scoping Document confirmed there were no data gaps.
- ⁸⁴ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps. MRID 43620101 was also cited.
- ⁸⁵ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁸⁶ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁸⁷ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁸⁸ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps. MRID 42991601 was also cited.
- ⁸⁹ **860.1500** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁰ **860.1500** – MRID 40490501 was listed in the RED as being acceptable and satisfies the data requirement. However, this citation could not be verified. Therefore, 44914204 and 44941601 were also cited. The Scoping Document confirmed there were no data gaps.
- ⁹¹ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹² **860.1500** – The studies cited were listed in the RED as being acceptable, but that additional data were required. It appears 42984001, 44208104, and 44208105 were submitted to satisfy those data gaps. The Scoping Document confirmed there were no data gaps.
- ⁹³ **860.1500** – The study cited was listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁴ **860.1500** – The study cited was listed in the RED as being acceptable as satisfying the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁵ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁶ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps. MRID 43775401 was also cited.
- ⁹⁷ **860.1500** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁸ **860.1520** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ⁹⁹ **860.1520** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰⁰ **860.1520** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰¹ **860.1520** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰² **860.1520** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰³ **860.1520** – The studies cited were listed in the RED as being acceptable, but that additional data were required. It appears 44208104 was submitted to satisfy those data gaps. The Scoping Document confirmed there were no data gaps.
- ¹⁰⁴ **860.1520** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰⁵ **860.1520** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰⁶ **860.1520** – The study cited was listed in the RED as being acceptable and satisfies the data requirement. The Scoping Document confirmed there were no data gaps.
- ¹⁰⁷ **860.1480** – The studies cited were listed in the RED as being acceptable and satisfy the data requirement and the

requirement is reserved. The Scoping Document confirmed there were no data gaps.

¹⁰⁸ **860.1900** – The studies cited were listed in the RED as currently being in review or acceptable. The Scoping Document confirmed there were no data gaps and no new data have been submitted since the RED.